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## WHAT IS CLAIMED IS:

1. A troughing idler installation comprising

side supports located opposite each other with respect to a space along which a conveyor belt moves along a belt path;

a horizontal shaft extending across the space between the side supports transversely to the belt path and having a medial roller affixed thereon;

antifriction bearings mounted on the side supports and supporting the horizontal shaft for rotation about a shaft axis; and

a side roller unit supported exclusively by ~~each~~ side support member, each side roller unit having

a side roller carrier that includes a spindle, a hub, and inboard and outboard antifriction bearings interposed between the spindle and the hub, and

a side roller supported in cantilevered relation with respect to the side support member by the side roller carrier about a spindle axis;

the medial roller and the side rollers being arranged relative to each other so as to support the belt with side portions of the belt sloping upwardly and outwardly with respect to a medial portion of the belt.



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3 closely spaced apart and proximate to the side support  
4 member.

1 <sup>16</sup>  
7. A troughing idler installation according to claim <sup>15</sup>  
2 wherein the side roller has a circular cylindrical shell and  
3 a dust cap is affixed in the inboard end of the shell.

1 <sup>17</sup>  
8. A troughing idler installation according to claim <sup>16</sup>  
2 wherein the support member is a side wall of a trunking of  
an enclosed belt conveyor, and the spindle is affixed to a  
mounting bracket received in an opening in the trunking side  
wall.

1 <sup>18</sup>  
9. A troughing idler installation according to claim <sup>17</sup>  
2 wherein the mounting bracket includes a sleeve surrounding  
an outboard end portion of the shell and the side roller  
unit includes a dust seal interposed between the sleeve and  
3 the shell.

1 <sup>13</sup>  
10. A troughing idler installation according to claim <sup>12</sup>  
wherein the spindle and the hub are elongated and are  
coextensive with a major portion of the side roller, and the  
inboard and outboard antifriction bearings are widely spaced  
apart on the spindle.

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<sup>14</sup>  
11. A troughing idler installation according to claim <sup>13</sup>~~10~~ wherein the side roller has a tubular shell, the shell is spaced apart radially from the hub, and spaced apart annular discs join the shell to the hub.

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<sup>2</sup>  
12. A troughing idler installation according to claim 1 wherein the hub is affixed to the side support member and the spindle is affixed to the side roller.

<sup>3</sup>  
13. A troughing idler installation according to claim <sup>2</sup>~~12~~ wherein the hub is affixed to the outboard side of the the support member.

<sup>4</sup>  
14. A troughing idler installation according to claim <sup>3</sup>~~13~~ wherein the spindle has a threaded outboard end and a retainer nut is threaded onto the outboard end and retains the outboard antifriction bearing on the spindle and prevents the spindle from sliding axially downwardly through the bearings.

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<sup>5</sup>  
15. A troughing idler installation according to claim <sup>4</sup>~~14~~ wherein the ~~hub has an~~ <sup>of the hub is</sup> outboard end located outwardly of the outboard bearing and the side roller unit further includes a

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hub cap on the outboard end of the hub to retain a lubricant within the hub.

16. A troughing idler installation according to claim <sup>15</sup>~~15~~ wherein the side roller unit includes a grease seal between the hub and the spindle inboard of the inboard antifriction bearing.

17. A troughing idler installation according to claim 16 wherein the side roller has a tubular shell and a dust cap is affixed in the inboard end of the shell.

18. A troughing idler installation according to claim 16 wherein the support member is a side wall of a trunking of ~~an enclosed belt conveyor.~~ and said belt conveyor is enclosed in said trunking

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